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(DC-02474)

PATENT APPLICATION

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09/637039
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APPLICATION FOR U.S. PATENT UNDER 37 C.F.R. 1.53(b)
TRANSMITTAL FORM

Box Patent Application
ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

Sir:

Transmitted herewith for filing is the patent application
of:

Inventor(s): Jenwei Hsieh, et al.

Entitled: SYSTEM AND METHOD FOR CABLING COMPUTING EQUIPMENT

Enclosed are: X Specification(26 pages)
 X Drawing(s) (3 Sheets Formal)

 X Signed combined Declaration and Power of Attorney.

 X Information Disclosure Statement (IDS) PTO-1449 with
copies of references cited.

 X Certificate of Mailing

 X Return Receipt Postcard

 X An Assignment of the invention to **DELL PRODUCTS L.P.** is
attached. A cover sheet in compliance with 37 C.F.R.
§§ 3.28 and 3.31 is included with the Assignment
recording fee of \$40.00 pursuant to 37 C.F.R.
§ 1.21(h).

Applicant is large Entity.

FEE CALCULATION					FEE
	Number		Number Extra	Rate	Basic Fee
					\$ 690.00
Total Claims:	23	-20 =	3	X \$18 =	\$ 54.00
Independent Claims	3	-3 =	0	X \$78 =	\$ 0.00
TOTAL FILING FEE =					\$ 744.00

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Enclosed is a check in the amount of \$744.00 to satisfy filing fee requirements under 37 C.F.R. § 1.16. Please charge any additional fees or credit any overpayment to Deposit Account No. 02-0383 of BAKER BOTTS L.L.P. **A duplicate copy of this sheet is enclosed.**

Respectfully submitted,

BAKER BOTTS L.L.P.
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

10864 U.S. PRO
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In re Application of: Jenwei Hsieh, et al.
Date Filed: August 10, 2000
Title: SYSTEM AND METHOD FOR CABLING
COMPUTING EQUIPMENT

Box Patent Application
Honorable Assistant Commissioner
of Patents
Washington, D.C. 20231

Dear Sir:

CERTIFICATE OF MAILING BY EXPRESS MAIL

I hereby certify that the attached Transmittal, Patent Application, Declaration and Power of Attorney, Formal Drawings, Assignment and Assignment Recordation Cover Sheet PTO-1595, Information Disclosure Statement and PTO-1449 with references are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on this 10th day of August 10, 2000, and is addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231.


Heather Bergeron

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016295.0619
(DC-02474)

SYSTEM AND METHOD FOR CABLING COMPUTING EQUIPMENT

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(DC-02474)

Figure 1 consists of 15 subplots (a-o) showing the evolution of various parameters over time (0 to 1000 days) for a 1000 kg fish. The subplots include:

- (a) Temperature (°C): Starts at 20°C, peaks at 25°C around day 200, and then fluctuates between 20°C and 25°C.
- (b) Salinity (g/L): Starts at 30 g/L, peaks at 35 g/L around day 200, and then fluctuates between 30 g/L and 35 g/L.
- (c) Dissolved Oxygen (mg/L): Starts at 5 mg/L, peaks at 10 mg/L around day 200, and then fluctuates between 5 mg/L and 10 mg/L.
- (d) pH: Starts at 7.5, peaks at 8.5 around day 200, and then fluctuates between 7.5 and 8.5.
- (e) Ammonia (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (f) Nitrite (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (g) Nitrate (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (h) Total Ammonia Nitrogen (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (i) Total Nitrite Nitrogen (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (j) Total Nitrate Nitrogen (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (k) Total Dissolved Solids (mg/L): Starts at 100 mg/L, peaks at 200 mg/L around day 200, and then fluctuates between 100 mg/L and 200 mg/L.
- (l) Total Suspended Solids (mg/L): Starts at 100 mg/L, peaks at 200 mg/L around day 200, and then fluctuates between 100 mg/L and 200 mg/L.
- (m) Total Phosphorus (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (n) Total Nitrogen (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.
- (o) Total Organic Carbon (mg/L): Starts at 0.5 mg/L, peaks at 1.5 mg/L around day 200, and then fluctuates between 0.5 mg/L and 1.5 mg/L.

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TECHNICAL FIELD

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BACKGROUND

Today, computers and their assorted peripherals are generally interconnected with a plurality of cables. In some instances, it may be that only one cable will fit in a particular computer slot and yet, in other cases, it may be possible for multiple cables to fit into a particular computer slot. To solve such problems, many computers and peripherals are being designed to use one communication scheme and therefore one cabling format. Universal Serial Bus is one such technology.

While such measures may become useful in the area of personal computers, large scale computing system implementations, such as server farms and server clusters, do not presently have the same luxury and are such a solution is not being considered. As such, large scale computing system implementations generally require many different cables of many different forms to interconnect many different computing components.

In addition to the task of connecting an appropriate cable to an appropriate port, the computing components used for large scale computing system implementations are often required to be connected in a predetermined topology. The results of cabling such complex computer installations out of order often include unexpected behavior of the system, system lock-ups as well as many additional otherwise avoidable problems. Miscabling in such large scale implementations, not to mention in the area of personal computers, can also result in numerous customer support and service issues.

SUMMARY

In accordance with teachings of the present disclosure, a system and method are described for cabling a computer system. Accordingly, in one embodiment, a method for cabling a plurality of computing components is provided. The method preferably includes determining a cabling connection to be made between a first computing component and a second computing component. The method preferably further includes generating a signal on the first computing component and the second computing component indicative of the cabling connection to be made.

In an alternate embodiment, an apparatus for cabling a computer system is provided. The apparatus generally includes at least one processor and memory preferably associated with the at least one processor. A management communications interface preferably coupled to a communications network, the processor and the memory is also preferably included in the apparatus. Generally to effect cabling, the apparatus preferably includes a program of instructions storable in the memory and executable in the processor. The program of instructions is preferably operable to generate at least one signal indicative of a cabling connection to be made to at least a first computing component of a plurality of computing components preferably coupled to the communications network.

In yet another embodiment, a computing system preferably including a plurality of computing components is provided. Each of the plurality of computing

An additional technical advantage provided by the present disclosure is the ability to adapt cabling instruction to a variety computer installations as well as to available computing components.

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BRIEF DESCRIPTION OF THE DRAWINGS

A more complete understanding of the present
embodiments and advantages thereof may be acquired by
referring to the following description taken in
5 conjunction with the accompanying drawings, in which like
reference numbers indicate like features, and wherein:

FIGURE 1 is a schematic diagram illustrating a
computing system cabled according to teachings of the
present disclosure;

10 FIGURE 2 is a schematic diagram illustrating a
computing system to be cabled according to teachings of
the present disclosure; and

FIGURE 3 is a flow diagram illustrating a method for
cabling a computing system incorporating teachings of the
15 present disclosure.

DETAILED DESCRIPTION

Preferred embodiments and their advantages are best understood by reference to FIGURES 1 through 3, wherein like numbers are used to indicate like and corresponding parts. Accordingly, to overcome limitations and difficulties in current methods of cabling computer installations, a method and system have been developed which are capable of guiding a cable installer through computer installation with multiple components.

FIGURE 1 illustrates one embodiment of a computing system cabled according to teachings of the present disclosure. In addition to the numerous interconnections to be made, computing systems such as computing system 100 must often be cabled in a specific order. As such, FIGURE 1 illustrates one example of the cabling complexity with which computing systems are typically associated. For example, the decision as to whether servers 105a - 105d are to be coupled to switches 110a and 110b before server 105a is coupled to storage unit 115 or whether server 105a is to be coupled to storage unit 115 before coupling switches 110a and 110b to servers 105a - 105d is just one of the many cabling complexities associated with sophisticated computing systems such as computing system 100.

As such, preferably included in computing system 100 are servers 105a - 105d, switches 110a and 110b, storage unit 115 and tape library 120. Computing system 100 may also include one or more routers, hubs, clients as well as various other computing components operable to function as a part of computing system 100.

Servers 105a - 105d preferably include component LEDs 125 (light emitting diode) and device LEDs 130a - 130d. Also preferably included on servers 105a - 105d is management communications interface 135. Similarly, switches 110a and 110b preferably include component LEDs 140, device LEDs 145a - 145j and device LEDs 147a - 147d. Management communications interface 150 is also preferably included on switches 110a and 110b.

Storage unit 115 preferably includes component LED 160, device LEDs 165a - 165d and management communications interface 170. Similarly, tape library 120 preferably includes component LED 175, device LEDs 180a - 180d and management communications interface 185. The uses and purposes of the various component LEDs, device LEDs and management communication interfaces will be described in greater detail below.

Interconnecting the computing components of system 100 are cables or patch cables 190. Depending upon the type of connection to be made between respective computing components, cables 190 may be Ethernet, Gigabit Ethernet, Fibre Channel, USB, Fire Wire, parallel, serial, SCSI or any other format operable to interconnect the computing components of a computing system such as computing system 100.

According to the present disclosure, the cabling of computing system 100 may be enabled by preferably coupling each of the computing components of computing system 100 to management communications network 205 as illustrated in FIGURE 2. Management communications interfaces 135, 150, 170 and 180 preferably enable such

coupling. Management communications network 205 may be a fast Ethernet network, or other network form operable to communicate with one or more computing components on a systems management or higher level. Accordingly,
5 management communications interfaces 135, 150, 170 and 180 may be Ethernet ports, serial ports, Fibre Channel ports, etc.

Many currently manufactured computing components are generally designed with at least one form of management
10 communication ability for such purposes as computing component addressing, network configurations, software downloads and the like. Such communication ability enables a cable installer to use laptop computer 210 or another suitable device enabled with teachings of the
15 present disclosure to communicate with the computing components to be incorporated into a computing system such as computing system 100. By coupling laptop computer 210 enabled with teachings of the present disclosure to management communications network 205,
20 proper, effective and efficient cabling of computing system 100 may be achieved.

Referring now to FIGURE 3, a flow diagram of a method for cabling a computing system is illustrated. In general, method 300 of FIGURE 3 preferably provides a
25 cable installer with signals or prompts such that the cable installer may be led through the preferred or proper cabling of a computing system installation. Method 300 may be implemented as a set of instructions that are storable in memory and executable by a processor
30 of a computing component.

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Upon beginning at step 305, method 300 may effect communication with the plurality of computing components preferably coupled to management communications network 205 such that each of the computing components may be identified, as indicated at step 310. Identification may include obtaining what type of component is to be cabled into a computing system, i.e., server, router, hub, bridge, storage device, etc. Identification of the computing components may also include determining what type of connection will be used for each computing component, i.e., Ethernet connections, SCSI (small computer system interface) connections, Fibre Channel connections, serial connections, etc. Various address assignments associated with each computing component may also be identified during step 310 of method 300. For example, a MAC (Media Access Control) address, IP (Internet protocol) address, Ethernet port address, etc., may be acquired from each computing component to be cabled into a computing system.

20 Once the computing components to be cabled into a computing system have been identified as desired at step 310, method 300 may proceed to step 315. At step 315, the cabling sequence of the computing components is preferably determined. Such a cabling sequence may be determined one computing component at a time or, an entire computing system cabling sequence may be determined prior to initiation of cabling.

25 Accordingly, at step 315, a first computing component to be cabled may be identified. Once a first

computing component to be cabled has been identified,
method 300 may proceed to step 320.

At step 320, identification of one or more computing
components to be cabled to the first computing component
5 identified at step 315 is preferably performed.
Depending on the computing system being cabled, one
computing component may be coupled to the first computing
component identified at step 315 or a plurality of
computing components may be coupled thereto. As such,
10 step 320 may be designed such that each of the computing
components to be coupled to the first computing component
identified at step 315 is identified. Alternatively,
step 320 may be designed such that only one of the
plurality of computing components to be cabled to the
15 first computing component is identified and selected for
cabling.

Upon identification of the one or more computing
components to be cabled to the first computing component,
method 300 may proceed to step 325. At step 325, one or
20 more connection points or ports on each computing
component to be cabled may be identified. For example,
if server 105a has been selected as the first computing
component to be cabled and switch 110a is the computing
component to which it is to be connected or cabled, it
25 may be preferable to use an Ethernet connection or port
on server 105a to cable server 105a to a similar port on
switch 110a. Similarly, if server 105a is selected as
the first computing component to be cabled and storage
unit 115 is the computing component to which server 105a
30 is to be cabled, it may be desirable to use a Fibre

Channel connection or port on server 105a for the cabling connection between the respective computing components. Alternatively, a SCSI connection may be preferred by storage unit 115 thereby requiring a SCSI port on server 5 105a to be employed for the cabling connection between the respective computing components.

Upon selection of one or more connection points or ports at step 325, method 300 may proceed to step 330. At step 330, guidance for the cabling of the first 10 computing component to be cabled to the remaining computing components may begin.

At step 330, one or more signals may be generated to indicate to a cable installer the location of the cabling connections to be made. As such, component LEDs 125, 15 140, 160 and 175 may be employed to first indicate which components are to be cabled together. Subsequently, device LEDs 130a - 130d, 145a - 145j, 147a - 147d, 165a - 165d and 180a - 180d may be employed to indicate which connection points or ports on the identified computing 20 components are to be cabled. In addition to or in replacement of illuminating LEDs present on the computing components to be cabled, alternate signaling implementations may be employed alone or in combination. Such signaling implementations may include, but are not 25 limited to, generating beep codes, powering on only selected components, generating flashing codes using assorted LEDs or other indicators, etc. Additionally, different forms of signalling may also be employed to indicate different things. For example, a green LED may 30 indicate that an Ethernet cable is to be used while a

Upon identifying an appropriate port, such as an Ethernet port, on server 105a, method 300 may illuminate device LED 130c to indicate that the device associated with device LED 130c is to have one end of an appropriate cable connected thereon. In addition, method 300 may also illuminate device LED 145b on switch 110a to indicate that a device associated with device LED 145b is to have the opposite end of the cable connected thereon. Accordingly, method 300 has indicated to a cable installer that a cable connection is to be made between a device associated with device LED 130c of server 105a and a device associated with device LED 145b of switch 110a.

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the appropriate ports or devices to be connected amongst server 105a and storage unit 115, method 300 may illuminate device LED 130a, for example a Fibre Channel port, of server 105a and device LED 165a of storage unit 115 to indicate a cabling connection to be made between
5 ports on the devices indicated by the respective device LEDs.

In part to effect proper cabling of a computing system 100, it may be desirable to ensure that the
10 preferred ports or connection points of the current computing components have been cabled as desired. Such a verification is provided for at step 335 of method 300. Accordingly, in one embodiment of method 300, upon generation of the signals indicative of cabling
15 connections to be made, method 300 may proceed to step 335 of FIGURE 3. At step 335, verification of the cabling connection between the indicated computing components and/or the identified ports or devices may be performed. Such a verification may be employed in such
20 scenarios where the order in which computing components are to be cabled will have significant effects on computing system 100 performance.

At step 340 of method 300, the computing components currently being connected are evaluated to determine
25 whether there are additional ports included on the respective computing components which require cabling. If a determination is made that there exists additional ports to be cabled, method 300 may proceed to step 325 for proper identification of the one or more ports to be
30 cabled and a reiteration of the remaining steps of method

300. If the results of the determination indicate that there are no additional ports on the current computing components to be cabled, method 300 may proceed to step 345.

5 At step 345, method 300 may again evaluate the computing components connected to management communications network 205 to determine whether any computing components remain to be cabled. Should one or more computing components be identified at step 345 as
10 requiring cabling connections, method 300 may proceed to step 315 such that the next computing components to be cabled may be identified, appropriately cabled and a reiteration of the remaining steps of method 300. Should
15 a determination be made at step 345 that all of the computing components to be cabled have been cabled, method 300 may end at step 350.

20 In an alternate implementation of method 300, two or more devices may be coupled together using management communications interfaces included thereon. A routine
25 similar to method 300 may be executed on one or more of the devices to indicate the cabling connections to be made between the computing components and the respective port or ports included on each. Through altering the computing components coupled together, an entire
30 computing system may be appropriately and effectively cabled.

 In summary the present disclosure provides a method and system operable to identify the computing components to be incorporated into a computing system. By
30 generating signals on the computing components, a cable

installer is able to cable the computing system accurately, efficiently and completely without having to wrestle with the limitations in existing methods of computing system cable installations. The present
5 disclosure also provides verification that computing components of a computer system have been properly cabled or interconnected with each other. The present disclosure may be applied to generally all types of computing components including, but not limited to,
10 servers, switches, hubs, storage devices, routers, etc.

Although the disclosed embodiments have been described in detail, it should be understood that various changes, substitutions and alterations can be made to the embodiments without departing from their spirit and
15 scope.

1. A method for cabling a plurality of computing components for a desired installation, the method comprising:

5 determining a cabling connection to be made between a first computing component and a second computing component; and

generating a signal on the first computing component and the second computing component indicative of the

10 cabling connection to be made.

2. The method of Claim 1 further comprising:
identifying the first computing component to be
connected to the second computing component; and
15 identifying the second computing component to be
connected to the first computing component.

3. The method of Claim 1 further comprising:
identifying at least one port on the first computing
20 component to be connected to at least one port on the
second computing component; and
identifying at least one port on the second
computing component to be connected to at least one port
on the first computing component.

4. The method of Claim 1 further comprising repeating the steps of determining a cabling connection and generating a signal until each of the plurality of computing components has been connected as desired for the installation.

5. The method of Claim 1 further comprising
illuminating at least one LED on the first computing
component and at least one LED on the second computing
5 component indicative of the cabling connection to be made
between the first computing component and the second
computing component.

6. The method of Claim 1 further comprising:
10 generating at least one signal on the first
computing component indicative of at least one port
included thereon to be connected to at least one port
included on the second computing component; and
generating at least one signal on the second
15 computing component indicative of the at least one port
included on the second computing component to be coupled
to the at least one port included on the first computing
component.

7. The method of Claim 1 further comprising
20 establishing communications with at least one computing
component to be connected via a management communications
interface.

8. The method of Claim 1 further comprising
25 altering the signal indicative of the cabling connection
to be made such that the signal indicates a type of
cabling connection to be made.

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9. The method of Claim 1 further comprising
verifying completion of the cabling connection between
the first computing component and the second computing
component.

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12. The apparatus of Claim 10 further comprising:
the program of instructions operable to identify at
least one port on the first computing component to be
connected to at least one port on at least a second
5 computing component; and

the program of instructions further operable to
identify at least one port on at least the second
computing component to be connected to the at least one
port on the first computing component.

10

13. The apparatus of Claim 10 further comprising
the program of instructions operable to illuminate at
least one LED on the first computing component indicative
of the cabling connection to be made with the first
15 computing component.

14. The apparatus of Claim 10 further comprising:
the program of instructions operable to generate at
least one signal on the first computing component
20 indicative of at least one port included thereon to be
connected to at least one port included on at least a
second computing component; and

the program of instructions further operable to
generate at least one signal on at least the second
25 computing component indicative of the at least one port
included on the second computing component to be coupled
to at least one port included on the first computing
component.

15. The apparatus of Claim 10 further comprising the program of instructions operable to alter the at least one signal to indicate a type of cabling connection to be made to the first computing component.

16. A computing system comprising:
a plurality of computing components;
each of the plurality of computing components
including a management communications interface operably
5 coupled to a communications network and at least one port
operable to connect to at least one port on at least one
of the plurality of computing components; and
at least one of the plurality of computing
components operable to identify a first computing
10 component to be connected to a second computing component
and operable to identify the second computing component
to be connected to the first computing component and
further operable to generate at least one signal on the
first computing component indicative of a cabling
15 connection to be made between the first computing
component and the second computing component.

17. The computing system of Claim 16 further
comprising the at least one computing component operable
20 to generate at least one signal on the second computing
component indicative of a cabling connection to be made
between the second computing component and the first
computing component.

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18. The computing system of Claim 16 further comprising:

each of the plurality of computing components having at least one LED included thereon; and

5 the at least one computing component further operable to illuminate the at least one LED on the first computing component and the at least one LED on the second computing component to indicate the cabling connection to be made between the first computing
10 component and the second component.

19. The computing system of Claim 18 further comprising:

the at least one LED included on the first computing
15 component associated with the at least one port included thereon; and

the at least one LED included on the second computing component associated with the at least one port included thereon.

20

20. The computing system of Claim 16 further comprising the at least one computing component operable to communicate with at least one of the plurality of the computing components via the management communications
25 interface and the communications network.

the at least one computing component operable to
alter the signal indicative of the cabling connection to
5 be made; and

10 22. The computing system of Claim 16 further comprising the at least one computing component operable to verify the cabling connection between the first computing component and the second computing component.

the at least one computing component operable to
determine a desired cabling sequence in which each of the
plurality of computing components are to be connected;
20 and

25

SYSTEM AND METHOD FOR CABLING COMPUTING EQUIPMENT

ABSTRACT OF THE DISCLOSURE

A system and method are disclosed for performing the installation of cabling in a computing system. In one embodiment, one or more configuration utilities are employed which guide an installer through the appropriate sequence of cable connections for a given computing system. By illuminating various LEDs present on the assorted computing components, an installer is provided with an indication of which component and which port should be connected first, second and so on such that an installation results in a robust computing system.

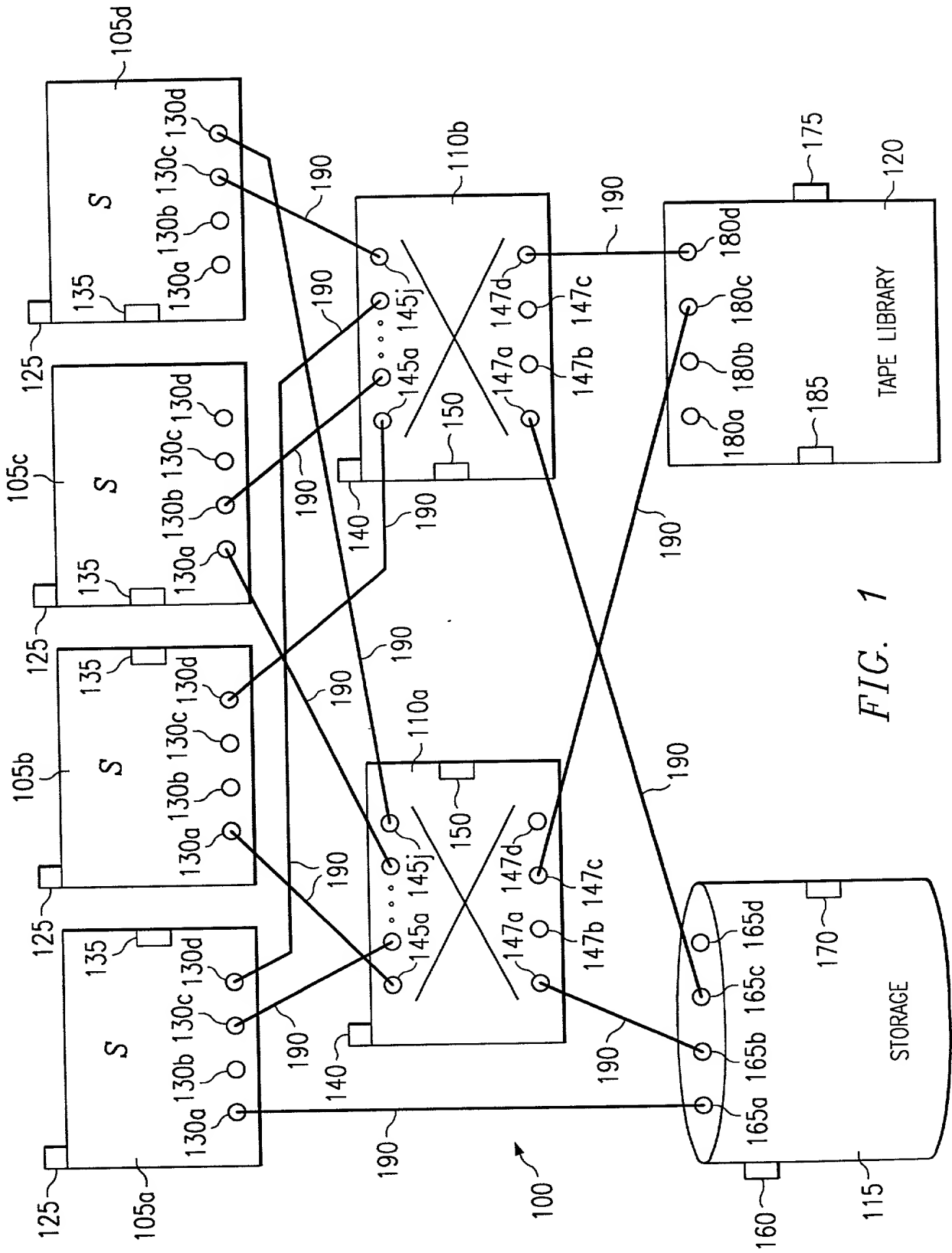
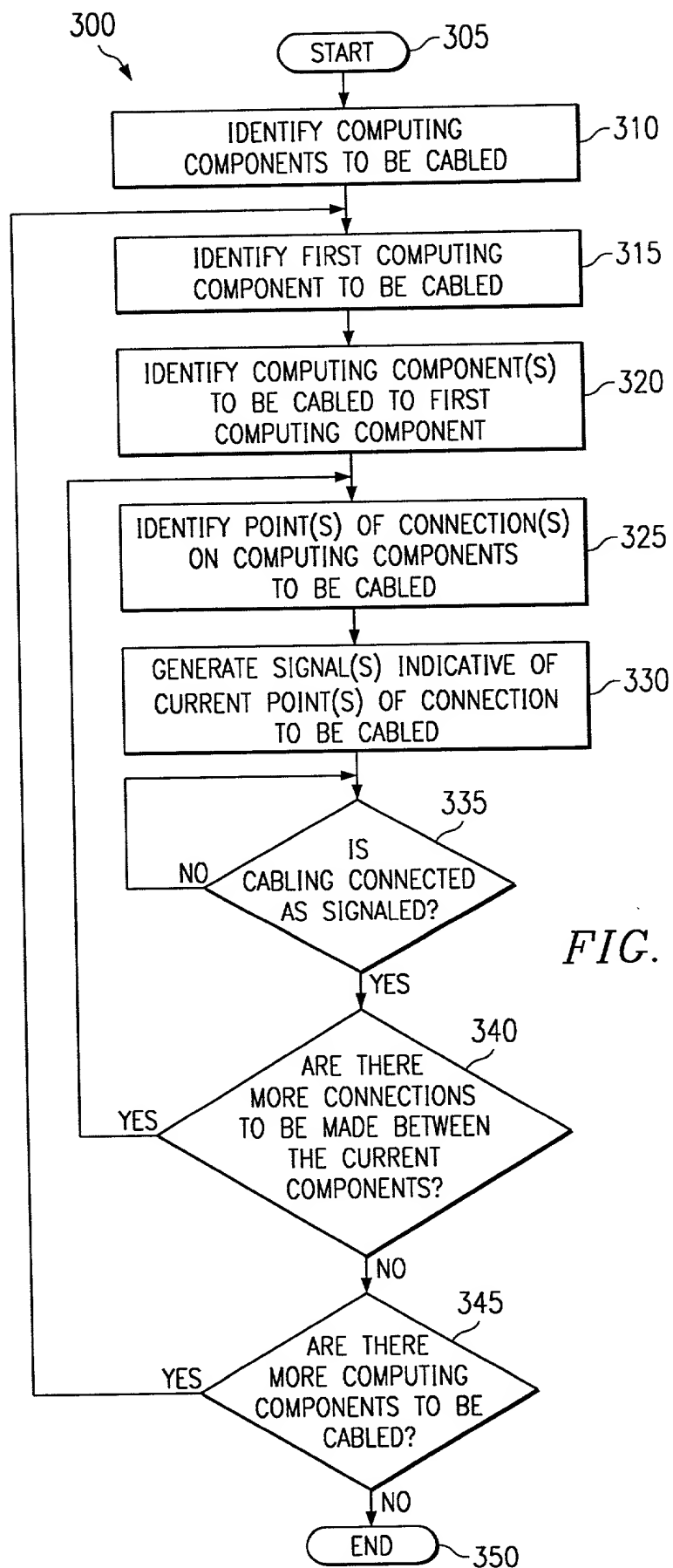


FIG. 1





DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; that I believe I am the original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention or design entitled **SYSTEM AND METHOD FOR CABLING COMPUTING EQUIPMENT**, the specification of which (check one):

 X is attached hereto; or

 was filed on as

Application Serial No.

and was amended on (if applicable);

that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above; and that I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>Number</u>	<u>Country</u>	<u>Date Filed</u>	<u>Priority Claimed (Yes) (No)</u>
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NONE

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I

acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56 which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

<u>Application</u> <u>Serial Number</u>	<u>Date</u> <u>Filed</u>	<u>Status</u>
NONE		

I hereby appoint:

Henry Garrana	Reg. No. 27,887
Mark P. Kahler	Reg. No. 29,178
Anthony E. Peterman	Reg. No. 38,270
Diana L. Roberts	Reg. No. 36,654

of Dell Computer Corporation, and the following:

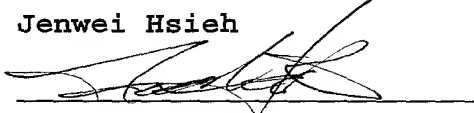
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Brian E. Szymczak	Reg. No. P47,120
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all of the firm of Baker Botts L.L.P., my attorneys and/or patent agents with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, and to file and prosecute any international patent applications filed thereon before any international authorities.

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(DC-02474)

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

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Inventor's Signature 
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V. Mashaykin

8	10	2000
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Round Rock (Williamson
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Table 1. Demographic characteristics of the study population	
Age (years)	
Mean	50.0
SD	10.0
Range	20-70
Gender	
Male	50
Female	50
Ethnicity	
White	40
Black	10
Hispanic	10
Other	40
Education (years)	
Mean	12.0
SD	2.0
Range	8-16
Income (USD/year)	
Mean	10,000
SD	5,000
Range	5,000-20,000
Marital status	
Married	40
Single	10
Divorced	10
Widowed	40
Employment status	
Employed	40
Unemployed	10
Retired	10
Other	40
Health status	
Good	40
Fair	10
Poor	10
Other	40
Smoking status	
Smoker	40
Non-smoker	10
Former smoker	10
Other	40
Alcohol consumption	
Regular	40
Occasional	10
Never	10
Other	40